



An Exploration of Alternative Urbanism

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Master's Thesis 2023

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Architecture and Urban Design
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CHALMERS
UNIVERSITY OF TECHNOLOGY

Hijacking the Roofs of central Gothenburg
– An Exploration of Alternative Urbanism

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Direction: Urban Challenges
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ABSTRACT

How can we utilize urban leftover spaces to implement an alternative urbanism in city centers?

Who are we building city centers for?

This thesis started out with the ambition to shed light on the lack of affordable housing in city centers and explore the potential of urban leftover spaces in relation to that. As cities become denser, architects are more and more challenged to design in previously overlooked urban infill spaces, which often accommodate great potential.

The aim of this thesis is to investigate adaptable alternative architecture and create a proposal for these infill spaces through that. The goal is to create an urban interruption that adds to the discussion of the current housing market, questions existing urban planning solutions and gentrification, and generates alternative urbanism based on the “right to the city” approach, by infiltrating cities and utilizing unused niches.

The process began by investigating alternative architecture, including urban interruptions by artists Jakob Wirth and Santiago Cirugeda. Which lead to a design proposal showcasing an alternative urbanism in a gentrified area of central Gothenburg. This urban exploration tests alternative typologies, usages, and the adaptability of architecture while encouraging citizens to actively shape and build their environment.

The spatial prototype is based on a flexible construction method that can hijack and spread over rooftops and infiltrate various leftover spaces in Gothenburg or other cities around the world. It offers space for people with a small budget to reside, provides opportunities for self-sufficient urban gardening, and creates communal spaces that strengthen local social sustainability, while challenging gentrification and questioning whom urban centers are designed for.

The project is located in an urban leftover space on top of a closed city block in Gothenburg’s former harbor district, Långgatorna. A district that used to have a rather dodgy reputation but made a gradual transition into a popular bar area in Gothenburg. However, it continues to undergo gentrification, and the authentic pubs may soon be replaced by modern hotels and restaurants for a more affluent audience.

STUDENT BACKGROUND

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INTRODUCTION

Thesis Question:

How can we utilize urban leftover spaces to implement an alternative urbanism in city centers?

Who are we building city centers for?

Aim:

Challenging the flexibility, adaptability and affordability of current city centers. Questioning existing urban planning solutions. Creating alternative urbanism which supports communal living, urban farming, and social sustainability. Activating citizens to shape their direct surroundings. Offering spaces for discourse.

Motivation:

I read about many different approaches to alternative architecture and see that it gets a lot of support from many directions. An interview from Steffen Braun gave me a lot of motivation to dive deeper into this topic.

Steffen Braun is the Head of Urban Systems Engineering Fraunhofer IOA and the founder of the initiative "Morgenstadt" (City of tomorrow). He says in the interview that it is essential to push for extraordinary projects, new dynamics and new directions in order to shape the future of our cities. He pleads for urban exploration and experimental spaces. Saying all innovations start in small gaps and through experimenting in these gaps, new social, technical economical conditions are created which will slowly adapt to the general society.

Braun says that we need those gaps to test our existing guidelines and then through that understand what we actually need and sparking new innovations in urban planning. He is pleading for architectural utopia, for housing and urban planning experiments which are

important as learning and testing spaces. Braun states that housing utopias of tomorrow are important because otherwise society would loose track and stay forever stuck in the present without seeing the whole spectrum of possibilities. He calls for the need to find these "green fields" where we can radically rethink principles. In my thesis I studied the possibilities of a underused space in Gothenburgs city center. Motivated by interviews like this one to make urban explorations to see a broader range of possibilities and what we need in a city. (Dürr, Kuhn, 2022 p. 77, 78)

Thesis delimitation:

My thesis won't give solutions for densifying urban centers in the most efficient way. It will be in the form of an conceptual artistic statement. It also won't be a large scale urban planning project where entire city structures are redeveloped. It will be a comment which simply adds on to the existing context. It is assumed that the connected roofs are able to carry the structure.

Method:

Making a design proposal in an urban context based on a site analysis and a research process about alternative architecture. Followed by the development of the program and the construction method of the proposed structure.

URBAN LEFTOVER SPACES

To promote urban densification and expand housing options, Rotterdam's municipality launched a program called Klein&Fijn (Small & Beautiful) in 2012. The initiative involved assigning Studio Hartzema to identify vacant residual plots in the city center suitable for new developments.

The outcome revealed a significant potential for densification, with approximately 3 million square meters available across numerous sites capable of accommodating small-scale projects. Following this research outcome, the municipality of Rotterdam introduced a new permitting process allowing to benefit of this potential and to realize of these projects. (Cutieru, 2020)

In a study about the potential of urban leftover spaces in Korea "Urban Voids: As a Chance for Sustainable Urban Design" by Seog Jeong Lee, Soewon Hwang and Dongha Lee, they use the term "urban voids" for these leftover spaces.

In the study they define urban voids as "unused, underused or currently used but can be in better usable conditioned spaces" and that "Urban voids are spaces that are useless, underused, abandoned, or in-between spaces among public and private realms.". They see a huge potential in these spaces "to convert or change their using for sustainable urban development" and suggest new approaches to utilize urban voids by reforming them and incorporating green technologies. (Lee, Hwang & Lee, 2015)

Both of these studies can be applied to many other cities as well as in Gothenburg. Even if these projects are from countries with a different urban grammar then Gothenburg urban leftover spaces are still a visible part of the city.

I made a quick sketch showing the potential alone in the closer surrounding of the area of Gothenburg I will be focusing on.



An early sketch of small build structures attached to blanc facades around Järntorget. Visualising the potential for additional housing, urban greenery and communal usage in urban voids.





HISTORY OF LÅNGGATORNA AND SITE MOTIVATION

When walking through the building blocks of Långgatorna, I came across a surprisingly open site in the middle of this popular central area in Gothenburg. I wondered how it was possible to keep that much space unused in a central area and it immediately sparked ideas in me about how to transform that space. This was the start of a journey analyzing urban leftover spaces, studying how people approached them before and making my own proposal for that site.

Långgatorna are the four main streets in Masthugget, a neighborhood consisting mostly of 3-6 story stone houses within regular urban blocks situated right next to one of the once most important harbors of Gothenburg, which used to be the center for maritime industries in the city.

Nowadays, it is a popular bar area, and the neighboring harbor has turned into a ferry terminal with ferries sailing to Denmark. The area had a rather shady reputation for a long time, particularly Andra Långgatan. It was characterized by a strange mix of antique shops and lunch places located next to strip clubs, and alternative clubs where sailors and dockworkers went looking for a good time in between work.

Today, Långgatorna is dominated by restaurants, bars, theaters, record shops, and galleries. The area is well-liked by many Gothenburg residents for its authenticity, as it houses smaller shops and pubs and no major commercial corporations. The porn shops and strip clubs have mostly been pushed away, but a few remain amidst the well-established bars and restaurants.

For a long time, Andra Långgatan was able to avoid the gentrification process that had already taken over other parts of Gothenburg's popular harbor neighborhoods, turning them into modern areas for relatively affluent citizens. Since the mid-2000s, however, gentrification has also become noticeable in Masthugget. Many pubs and shops have been taken over and renovated by investors with good financial conditions. More recently, plans to densify the area by building profitable hotels have been shared.



*Andra Långgatan, November 1961
Photograph: Göteborgs stadsmuseum via gp.se*

Reconfiguration of the harbour and the area of Långgatorna throughout the years.



1890

Maps: goteborg.se “Kartor från Jubileumsutställningen 1923”



1921



Masthugget in ca. 1960

Images: lantmateriet.se



Masthugget in 2022



A simulation of the new Masthugsskajen district.

Retrieved March 02, 2023 from <https://masthugsskajen.se/omradet/>

Gentrification refers to the displacement of lower-income households by wealthier ones in an urban setting, which causes social inequality in the housing markets. It can also involve the displacement of residential or other commercial users by more profitable forms of use.

Having the ability to choose one's housing condition and situation is a privilege for those who can afford it financially. Being forced to leave an apartment against one's will due not being able to afford the rent anymore because of certain political decisions is a result of inequality. Under the slogan 'right to the city,' social movements and protesters are denouncing spatial inequalities and demanding a multifaceted approach to reclaim the city. (Kronauer, 2018)

The massive urban rebranding project “Masthugsskajen”, which is currently being realized in close proximity, will only accelerate the gentrification process of the entire area of Långgatorna. “Masthugsskajen” will transform the area along the river and Första Långgatan towards Järntorget from an industrial harbor to a high-rise office building typology.

Masthugsskajen and Långgatorna form a very interesting hotspot in current Gothenburg, as it has already undergone a massive shift and continues to do so. It is the focus of a local gentrification discourse, which drew my attention to this site. My project will represent a resistance against the gentrification of Andra Långgatan and make a statement about who to prioritize when restructuring this quarter, asking questions like “Do we need to build another hotel in Masthugget instead of providing space for low-income households?”

THE TESTING GROUND

I have selected a site on Långgatorna to develop and test a structure that aligns with these interests. The location is in the city center of Gothenburg, close to Järntorget and in the middle of an area affected by the gentrification. The site is a small one-story building on Nordhemsgatan, a side street of the popular Andra Långgatan. The building is situated between a three-story and a five-story building, leaving an unusual amount of space above it in an otherwise closed urban block.

The unique configuration of the buildings originates from the 1800s when the corner building at the intersection of Tredje Långgatan and Nordhemsgatan was gradually constructed as a factory building with an attached shed. My proposal will focus on the shed's roof. The corner building, with its large courtyard, was originally built as a factory and workshop for the plumbing company AJG Bissmarck & Co. Its continuous construction occurred at various stages between 1899 and 1924.

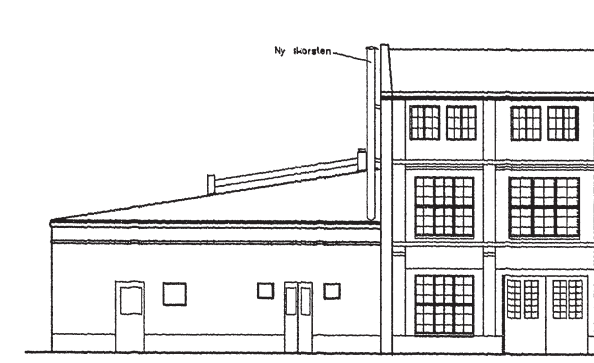


Nordhemsgatan 22-24 next to Andra Långgatan.
Images from Google Earth

The shed was initially built in 1884 to store ice blocks and was later directly connected to the factory building. Over the years, it has been used for various purposes, including craft markets, cafes, and antique shops. Currently, it serves as a pub with a wine cellar.

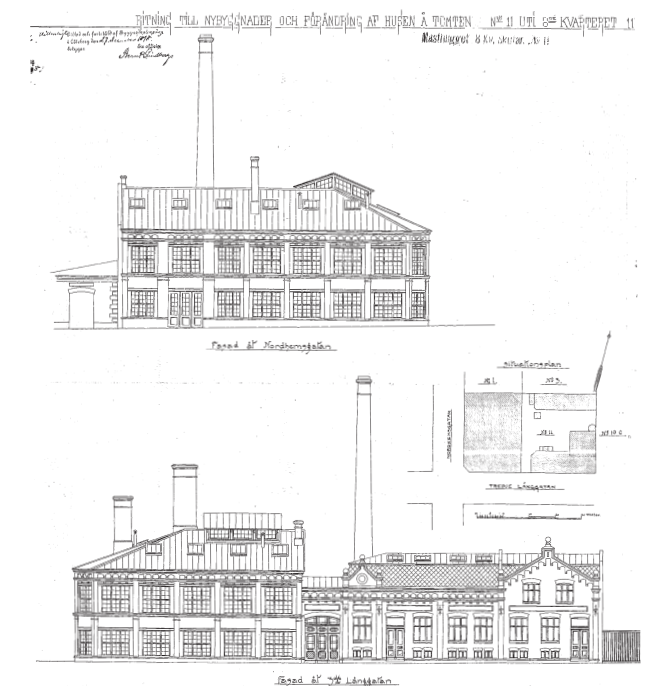
Today, both buildings house pubs, wine bars, and small creative office spaces. They are surrounded by galleries, tattoo studios, a market hall, bars, and restaurants. These establishments cater to a wealthier clientele and contribute to the gentrification of Masthugget.

The single-story building on the plot remained largely unchanged over time. In today's context, it stands out from the local urban grammar, which consists of historic three- to six-story closed-block structures from the early 1900s, due to the unusual amount of unused open space above it.



Fasad mot Nordhemsgatan
Elevation from 2008
of Nordhemsgatan 22-24

Image: by the author.



Historic elevation drawings from 1898 of the factory at the intersection of Tredje Långgatan and Nordhemsgatan.

The single-story building, which is now a pub, was originally used as a shed as well as the building to the left of it. By the time the one-story building was already existing for a long time, the shed to the left had been replaced by the current five-story housing block.

The housing block leaves a large empty surface facing the pub next to it. Both the space above the pub and the large empty facades facing it offer a great canvas for experimentation and have sparked numerous ideas in my head.

There have been plans about partially demolishing and extending the corner building at the intersection of Tredje Långgatan and Nordhemsgatan to construct a large hotel on the site.

A few years ago, Herlitz Properties, the owner of the buildings, submitted a building permit application to convert the properties into a hotel. The plans involved demolishing the inside of the building and preserving only the facades to then extend it to four stories to accommodate a large hotel. These plans would also impact the pub and other surrounding buildings.

The proposed conversion faced strong opposition from local residents and also the city planning office expressed a strong will to preserve the existing buildings as they are considered valuable. The building permit application has been on hold for several years as the process raised deeper city planning issues. This led to adjustments of 70-year-old detailed plans of the area by the city planning office to establish clearer principles to prevent demolitions of valuable cultural institutions.

The pressure on this project is high, and many people compare this case to Haga, a neighboring quarter. It underwent significant demolitions in the 70s and 80s, which are now deeply regretted. Showing the importance of handling such plans with caution.

Local residents support the decision of the city planning office to change the old detailed plan as it creates an opportunity to gain a wider perspective on interventions in Nordhemsgatan and involve the public next to the property owner, making the process more democratic. (Yousuf, 2021).

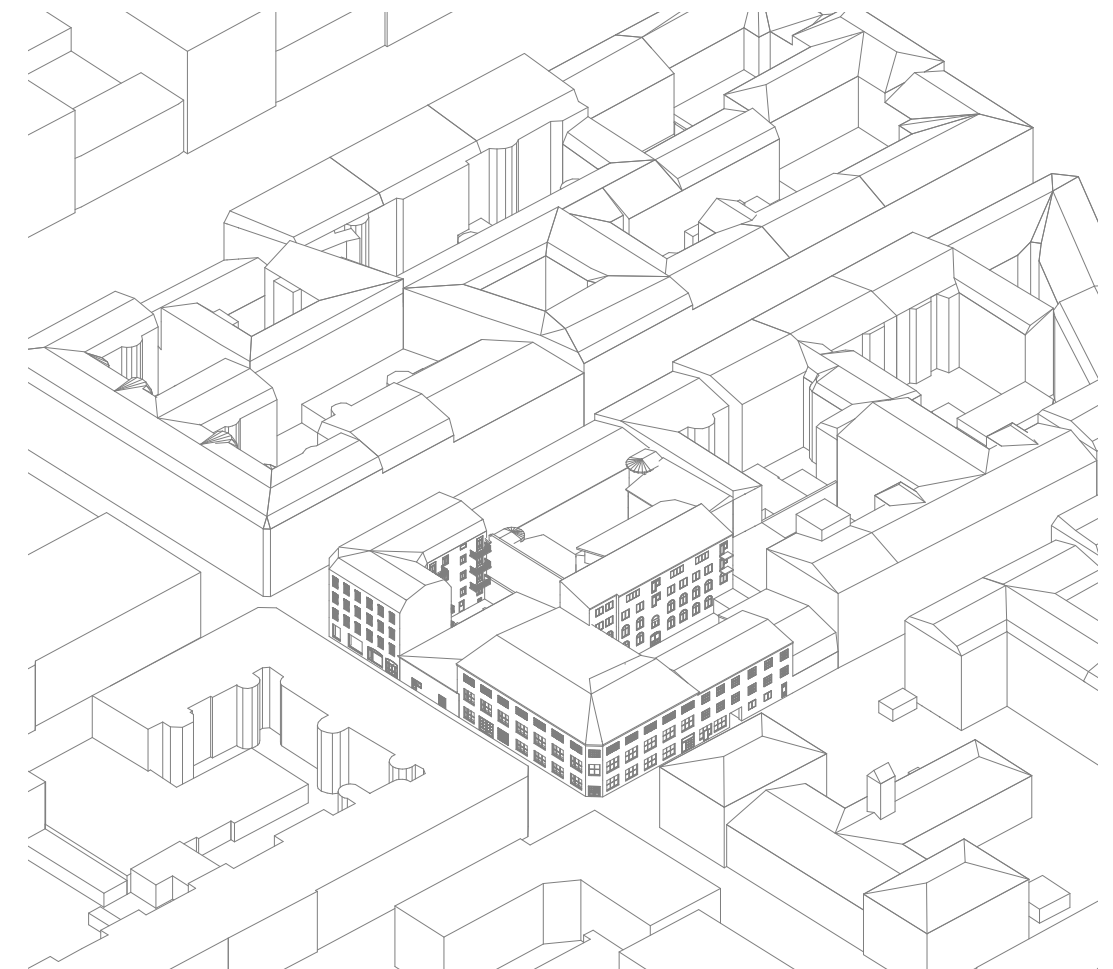
Compared to the proposal for a profitable hotel, I will seek for alternative urban usages in this area.

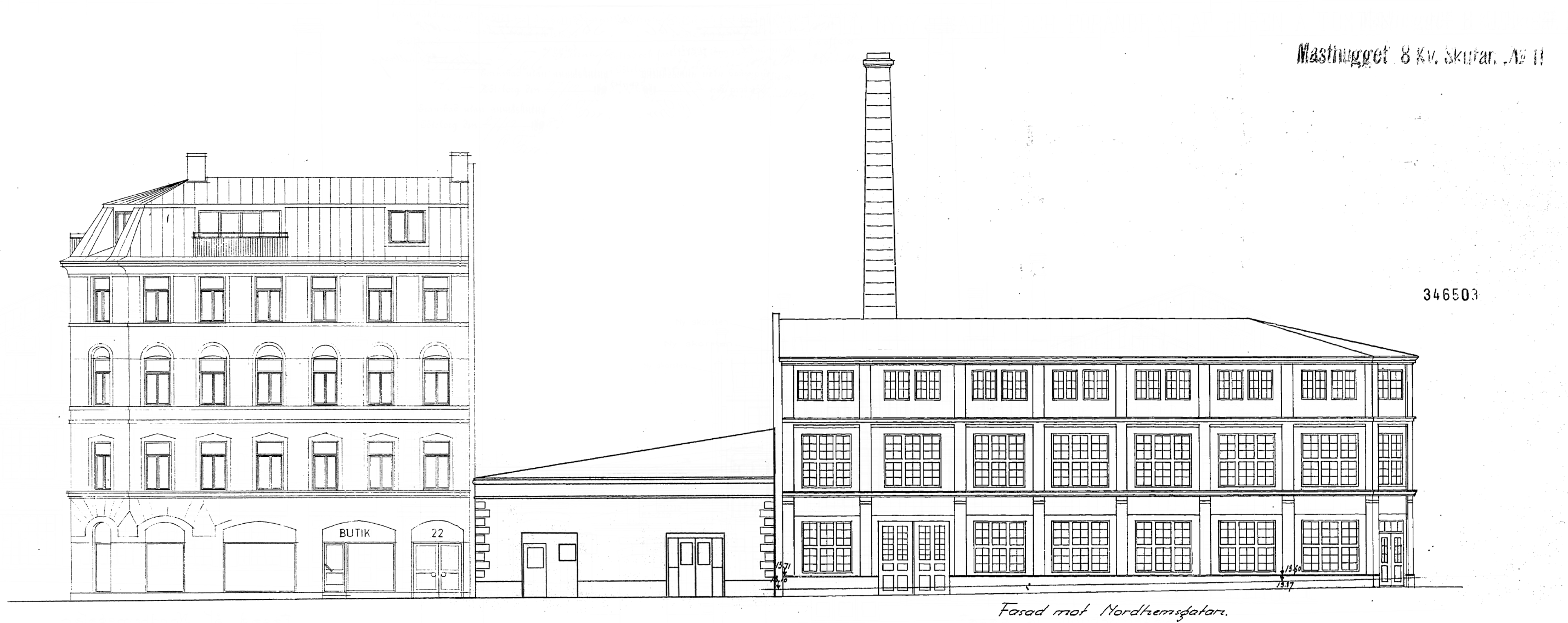
The following articles and projects have motivated me to work with alternative architecture and to propose a more democratic structure which treats the existing buildings with more care.



A perspective of the envisioned hotel in Tredje Långgatan.

Image: Herlitz, RÅformat, Okidoki Arkitekter via Göteborgs-Posten





A collage of the historical facades of the site along Nordhemsgatan.

INVESTIGATING ALTERNATIVE ARCHITECTURE

“Squatting as an alternative housing strategy can address exclusion from the housing market, for example of young people, or a housing shortage in general, but it can simultaneously demonstrate the use value of buildings, blocks or neighbourhoods that planners have slated for demolition, or develop into a protest against real estate speculation.” (Pruijt 2013: 41)

These references started my journey of investigating further into alternative architecture for possible approaches to the open, unused space above the pub in Nordhemsgatan. All of them share the ideal of occupying dead urban spaces while commenting on the lack of space in cities in different ways.

The first two projects question the mobility and flexibility of architecture in a provocative and artistic way, while the last two projects propose more permanent and functional, yet still playful, infills in an urban context. I want to combine both approaches and take their ideals into a more architectural context while discussing societal aspects.

All references attach onto existing structures, which follows the aim of this thesis. The existing structures of a city offer enough potential surfaces to add on to and can save space and resources when used.

The first two references are made by German artists who were, to some degree, influenced by “Recht auf Stadt,” a network of squatters, tenants, and artists primarily from Hamburg. The slogan “Right to the city” originates from Henri Lefebvre’s “Le droit à la ville.” and occurs in cities around the world since the late 1960s. It has been taken up more recently by social movements, protestors, and progressive local authorities denouncing spatial inequalities and demanding to reclaim the city as a more multifaceted space.

These references were my earliest inspirations to question existing spatial inequalities in Gothenburg and explore architectural solutions that add to its discourse and contradict gentrification processes.



Stefan Eberstadt
Rucksack House in Germany
Image: Claus Bach
<http://www.stefaneberstadt.de/rucksack.html>

Jakob Wirth
Penthaus à la Parasit in Munich
Image: Andreas Kühnlein
<https://www.ad-magazin.de/article/tinyhouse-penthaus-a-la-parasit>

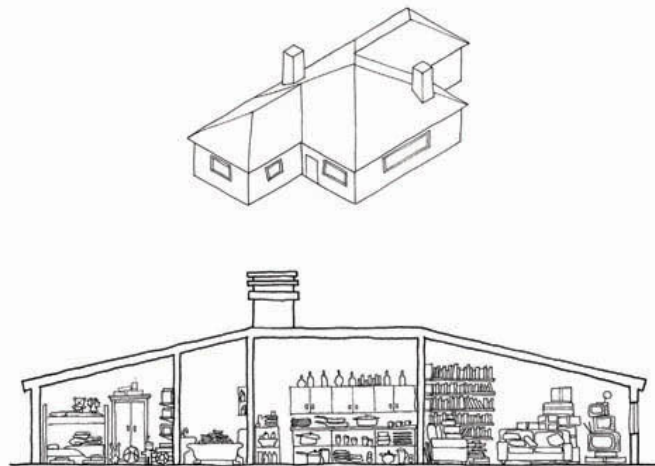
Malka Architecture
3BOX in Paris (concept)
Image: <https://stephanemalka.com/portfolio/3box-i-on-the-roof-tops-i-paris-2016/>

Za Bor Architects
Parasite Office in Moscow (concept)
Image: Peter Zaytsev
<https://www.archdaily.com/138151/parasite-office-za-bor-architects>

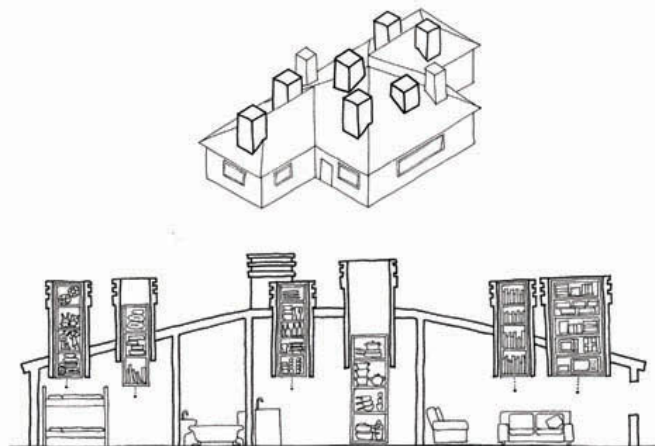
BUILDING WITHOUT BUREAUCRACY

CHIMNEY SWEEP

Mr Stoker is a hoarder. He constantly clutters his house with his many collections, which drives Mrs Stoker to despair. The couple needs more space for storage, but their small plot cannot fit an extension.



There are no laws that specifically define what a chimney is. Could a chimney be used for any purpose? Could it be any shape and size? Could the Stokers build a series of chimneys to store their possessions and realise Mrs Stoker's ideal home?



From the book
"SUB-PLAN: A Guide to Permitted Development"
via BLDGBLOG

The article "The Permission We Already Have" by Geoff Manaugh presents the investigations by David Knight and Finn Williams in the fields of architecture and urban planning, and their book called "SUB-PLAN: A Guide to Permitted Development".

In the book, they explore the limits of legislation when building and finding solutions for "building without bureaucracy".

Manaugh also mentions the Swedish "Friggebod" in connection with autonomous planning zones. These are small-scale structures, mostly sheds or garages, of a maximum size of 15 m² that can be added to existing buildings without obtaining a construction permit. They have become extremely popular in Sweden since they were introduced in 1979, proving that if people are given the freedom to build, they will make use of it, and that more space is needed.

"These autonomous planning zones (like the Friggebod), so to speak, open up architectural production to non-architects in a possibly quite radical way. So how do we take advantage of them?" (Manaugh, 2010)

The author connects the case of the "Chimney Sweep" from Knight and Williams' book to the Friggebod. They both stretch the possibilities of extending one's house to personal needs without obtaining building permits and staying within official urban planning guidelines.

This makes me wonder to what degree we could enlarge and alter housing blocks in city centers outside the limits of legislation, creating informal architecture onto a set urban grammar.

PENTHAUS À LA PARASIT

The artist Jakob Wirth sheds light on the lack of affordable housing with his project “Penthaus à la Parasit” - an appropriation from above, as he calls it. It is a mobile tiny house that appears on rooftops in the most expensive areas of the city. Previously in Weimar, Berlin, and more recently it drew attention to the issues in Munich’s housing market.

Rooftops are usually either neglected or designated exclusively for penthouses. However, Jakob Wirth disrupts this convention by introducing the „Penthaus à la Parasit,“ which reclaims the building from top to bottom. The “Penthaus” can be rented out for one night by anybody interested and is even for sale, creating a possibility for citizens to reclaim their power to act.

“An appropriation from above was realized by looking at the niches and gaps and inhabiting them. Therefore the Penthaus à la Parasit began to experiment with the limits and norms of the building laws and ownership, Thereby it challenges these set hierarchies of the housing market and the order of the city.

The privilege of freedom, farsightedness, centrality and the right to the city remain precarious as they are constantly threatened and unstabilized. “

– Jakob Wirth

Image: Peter Kneffel

https://www.marktspiegel.de/nuernberg/imagepost/bild-des-tages-penthaus-la-parasit_i2538

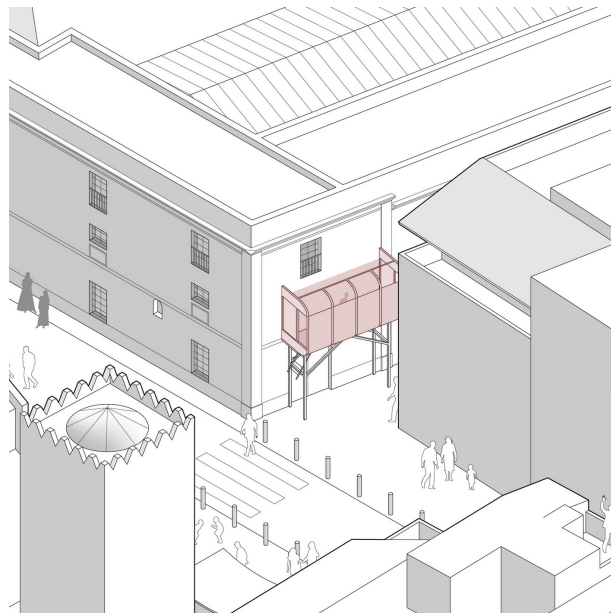


The “Penthaus à la Parasit” on top of a parking garage in central Munich.

Image: Andreas Kühnlein

<https://www.ad-magazin.de/article/tinyhouse-penthaus-a-la-parasit>

URBAN HACKTIVISM BY SANTIAGO CIRUGEDA



*Drawing from the virtual symposium “piggybacking practices” of the University of Arkansas.
Website: piggybackingpractices.com/habitable-scaffolding.*

The Spanish architect and activist Santiago Cirugeda is known for his guerrilla architecture, also known as “urban hacktivism”. He uses urban interventions as commentary on the rigidity of local planning laws and empowers citizens to modify the built environment in a more responsive and interactive way. He is constantly working towards democratizing the production of space by reshaping the city from the bottom up, as he recognizes that it is almost impossible for citizens to take action to improve their local environment. That is why Cirugeda publishes step-by-step instructions online so that everyone can replicate these ideas, promoting a DIY urbanism and questioning the role of architects.

For example, in the project ‘Public Domain Occupation with Skips’, he ordered skips which were placed in public streets and installed seesaws on top of them in order to activate the public space without the need for official permits for playgrounds.

In another proposal, he added scaffolding to a façade in a historic district of Seville, Spain. It was seemingly needed for a repainting job, but instead, he created an enclosed space with it, offering a temporary alternative space and making the scaffolding a parasitic urban appendage, providing an “urban reserve,” as Cirugeda calls it.



*Cirugeda's “urban reserve” in Seville, Spain.
Image: <https://spatialagency.net/database/santiago.cirugeda>*

SCAFFOLDING PAVILIONS BY RAUMLABORBERLIN

Raumlaborberlin is an architecture and urban design collective based in Berlin, Germany, whose work focuses on creating temporary and experimental structures that engage with the public and address social and political issues. They often collaborate with local communities and stakeholders to develop projects that are site-specific and responsive to the context in which they are situated.

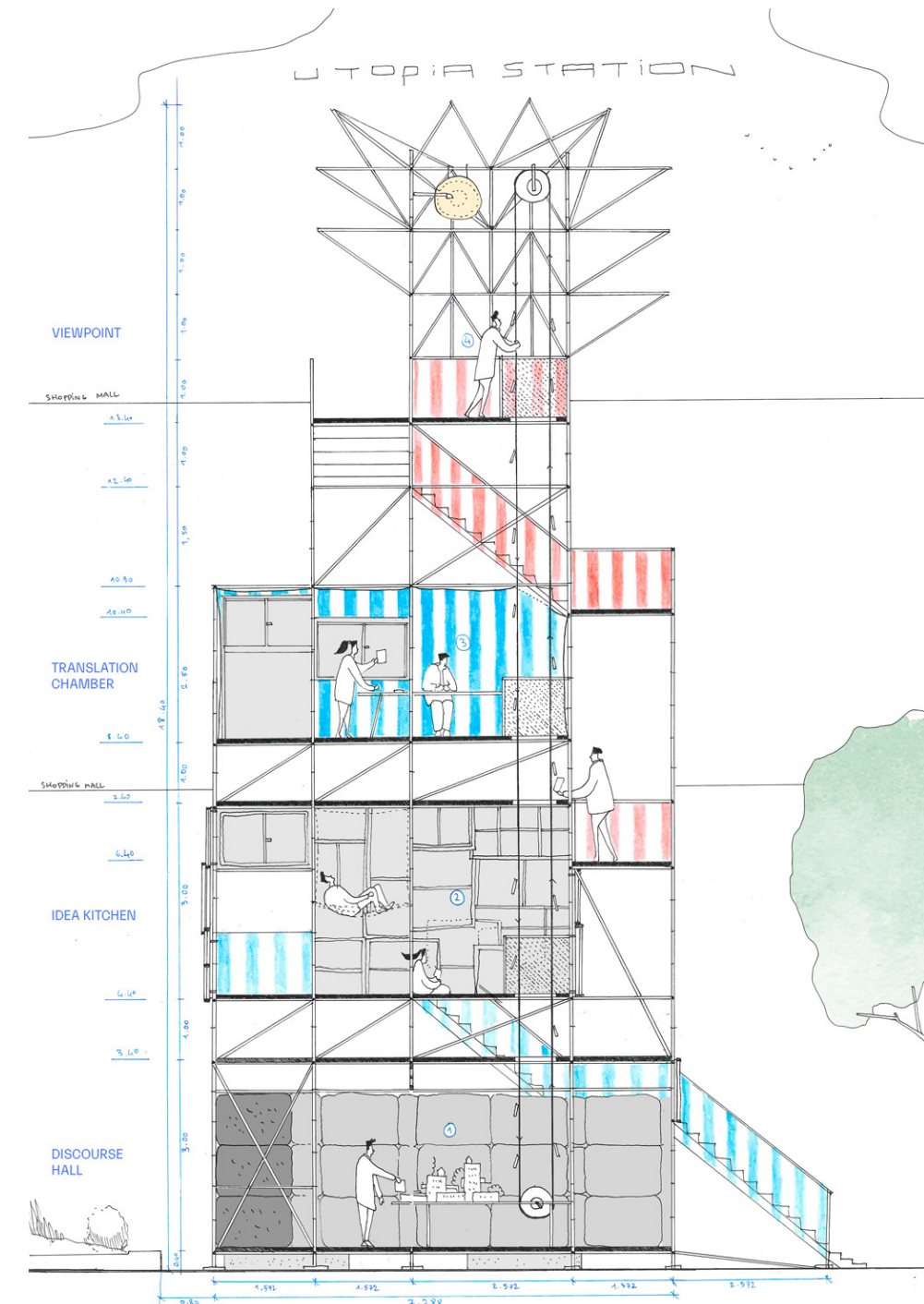
During my research I came across some of their scaffolding pavilions which offer flexible spaces for cultural events, workshops, and discussions.

For instance, in 2019, they created the “Utopia Station” for the Festival of Creative Urban Living in Milton Keynes, England. Under the title „the built, the unbuilt and the unbuildable“ the festival aimed to explore how people can live well in cities now and in the future, and it critically reflected on the city’s urban design principles and their relevance to the 21st century. The “Utopia Station” invited the residents of Milton Keynes to discuss, edit, and design a utopian city through collaborative workshops envisioning the future of the city.

The section shows the playful adaptiveness and functionality of the scaffolding, which offers various meeting places for different usages. As well as bringing attention to the city’s urban planning ideals and strengthening the community while giving them a voice.



*“The Built, The Unbuilt and The Unbuildable”
Pavilion by raumlaborberlin in England.
Image: raumlaborberlin, 2019*



*Section of the “Utopia Station” by raumlaborberlin.
(raumlaborberlin, 2019)*

“Junipark” was part of a campaign by a youth, art, and culture house in Berlin called “Schlesische27”. The “Wohnwut” campaign was based on peer-to-peer surveys concerning the housing circumstances for young people in Berlin. The surveys were made in 2013 and published in 2014. The campaign ended in “Junipark”, a month-long festival that manifested the survey results. It addressed Berlin’s issues with affordable housing for young people by organizing a space for discussions, workshops, performances, and projects.

The festival aimed to capture current discussions about gentrification and rent explosions, as well as to develop and invent urban utopias.

At the end of the festival, these activities led to the “Wohngut” charta in which young participants formulated their concerns, ideas, and proposals to Berlin politics. Raumlaborberlin designed the space in which the festival was held.

Pavilion by raumlaborberlin for the „Junipark“ festival in Berlin, Germany
Image: raumlaborberlin, 2014
<https://raumlabor.net/junipark/>



One of the many communal activities of Junipark in the pavilion by raumlaborberlin.
Image: Mi Ohlendorf
on <https://raumlabor.net/junipark/>



Overall, the Festival of Creative Urban Living and Junipark were both valuable platforms that opened constructive conversation about the future of urban living. By engaging the community in the planning and design of the city, they both provided an opportunity to envision a sustainable and inclusive future for the citizens. These two references helped me to define the aim of this thesis, which is to create such a platform for the citizens of Långgatorna.

SCAFFOLDING CITY'S PAST AND FUTURE

Edward Dodington is the founding editor and chairman of the board of “The Expanded Environment” which is a non-profit organization that focuses on showcasing innovative methods of incorporating biological and ecological elements into the built environment. In his article “Scaffolding City. In search of a semi-living architecture” on expandedenvironment.org he argues that “the current model of architecture and urbanism, based on planning, authority, history, and permanence”, is outdated and unsuitable for our rapidly expanding and fast-paced world.

He states that it has “less and **less ability to solve** today’s economic and ecological problems. Instead, a system of **speed, flexibility and soft-structure** is required for the World’s most complex social, environmental, and economic issues.”

Dodington considers implementing agile systems and proposes an architectural solution that emphasizes speed, lightness, and flexibility to address current urban problems. He refers back to projects from the mid-1950s

and 1960s by Buckminster Fuller, Peter Cook, and particularly Yona Friedman. Friedman was known for his highly adaptable and mobile architectural and urban models which addressed the most urgent and prominent issues of the post-war era. However, the author points out that there was something missing and even unsettling and totalitarian about each of these megastructures. He states that they were unable to fulfill their promises of freedom and democracy in many ways.

Dodington calls for the revival of the Megastructuralists. He sees a need for urban scenarios that provide infinite flexibility, quick construction, and the utilization of lightweight materials and “plug and play” approaches, which are inspired by Fuller and Friedman. He suggests adapting these methods to incorporate ecological and biological aspects while drawing inspiration from past building techniques such as tents, wigwams, teepees, and stick structures.

“Scaffolding City is a place where citizens hold the potential to **reshape their cities** and where the built landscape becomes a collectively more **active, agile and soft system**. It is a radically heterogeneous city — **part super-structure, part favela, part bird-nest and part tree house** where many different urban animals can roost, camp, and live. It is sometimes a **parasitic or a symbiotic structure**, latching on to other structures or borrowing resources for a short amount of time. In return, Scaffolding City **capitalizes under-utilized spaces** and generates micro-economies of alternative resources. This city has never been seen before but might look strangely familiar. It is a city from the future past.”

– Edward Dodington

He then ends the article with the following principles which I see as highly relevant to my project:

The Need for Speed

Our current model of architecture is too slow. It is **too slow to respond** to global ecological and economic crisis alike. We need a faster system. One that can **quickly adapt, bend, strategically buckle, and rebuild**. The trend has been moving in the direction of increasing speed — it just needs to get faster.

Redundancy

The new ethos is for designers to **embrace change and flexibility** — unknowns will remain unknown and new unknowns will be discovered. To design for eventual and partial failure is more realistic than an “impervious” or materially efficient design.

Network the System

The development plan of the city will rely not on a strict plan but on access and proximity to resources, local economic conditions and ecology. This will be a **dynamic system** of planning, **free to move** from location to location.

Open to Economy

Incentivize use. **Keep material costs low** and the system will **generate innovative uses and techniques**. People will **re-interpret materials, re-invent uses** and develop secondary and tertiary economies surrounding the transfer and transformation of materials.

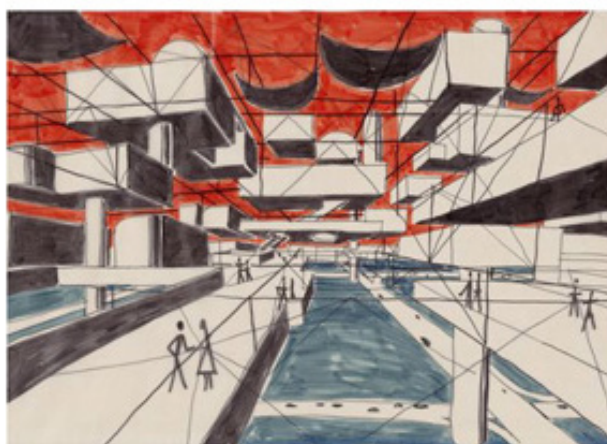
Democratize the Construction Process

and lower the level of specialized construction knowledge. **Each citizen can become a contractor**, and thereby become an **active member** of a growing system.

Open to Ecology

The new architectural city will be easily accessible and amenable to **other animals for civic habitation**. Its openness will take advantage of ecological assets, getting stronger as it is incorporated into a living thicket of trees or gathering thicker as populations of birds and animals make it their homes.

(Dodington, 2012)



Yona Friedman's “Spatial City” from the late 1950’s.

A representation of his theory, showcasing the idea of mobility through the construction of a three dimensional space-frame that covers a designated area such as a city, farm or highway. This structure offers an infinitely adaptable space for its inhabitants.

Images: The Expanded Environment. <http://www.expandedenvironment.org/scaffolding-city-2/>

While the idea of a lightweight and mobile architecture is not new, the Scaffolding City is an innovative approach to urban design that highlights the importance of flexibility, adaptability, and ecological consciousness to create a unique vision of the future.

By democratizing the construction process and embracing change and flexibility, the Scaffolding City offers a model of urbanism that is able to respond to the needs of citizens and ecological challenges. It envisions a constantly evolving city where citizens become active participants in the construction and development of their own environment.

Reflecting on my research outcome

The “Urban Reserve” by Cirugeda and the “Penthaus à la Parasit” by Wirth have inspired me to propose a more radical approach to architecture and take over the rooftops of Gothenburg. “Scaffolding City” offers an ideal architectural solution for a city that is constantly evolving and striving to meet the needs and desires of its citizens. I want to test how this approach could be applied to Masthugget in Gothenburg.

All of these projects share a common perspective on human-scale urban planning and support the “Right to the City” movement. They have helped me to build the foundation of my project and directed me in creating an alternative urbanism with a protest architecture approach.

The scaffolding system is a perfect solution to utilize the unused urban spaces in Långgatorna to create areas of greenery, communal spaces and alternative housing options. While at the same time symbolizing a critique of the gentrification of the area. The scaffolding pavilions by raumlaborberlin have been particularly helpful in defining the usage and program of the communal meeting place in my proposal. They have also motivated me to use architecture as a tool to draw attention to issues in our built environment and society.

**IMPLEMENTING THE
RESEARCH OUTCOME ON
THE TESTING GROUND IN
LÅNGGATORNA.**



EARLY EXPLORATIONS



A sketch of the “Penthaus à la Parasit” in Gothenburg.

A statement build structure just like the “Rucksack House” or the “Penthaus à la Parasit” constructed by 1-2 persons. Simply hanging off the existing facade and being accessible through the connected house.



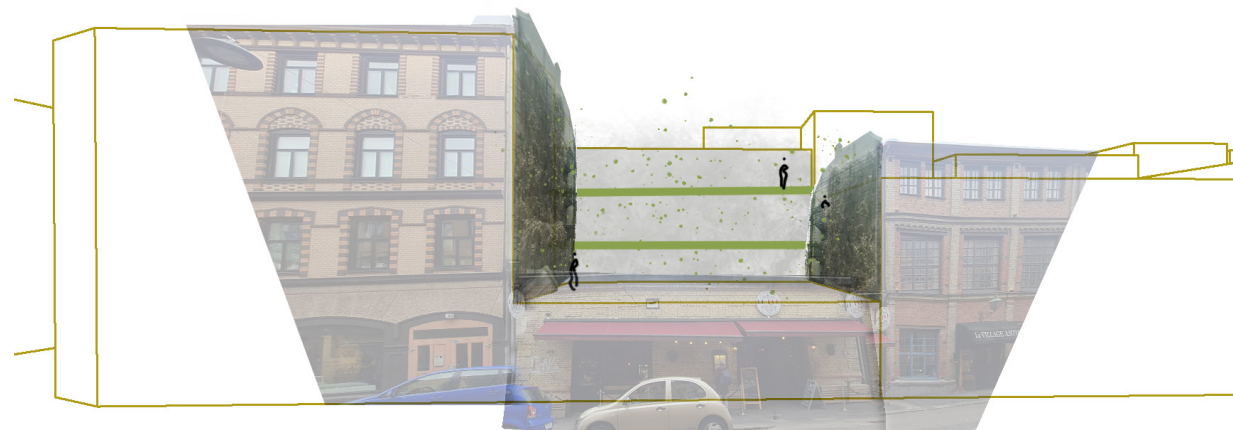
A treehouse type of shelter mostly built of found materials created by a group of squatters. A functional building unit sitting between the neighbouring buildings.





A gap in an urban block in Copenhagen which was transformed into a green courtyard by adding balconies on the existing facades.

This courtyard inspired me to create a collage of a version where the space above the pub remained open and served as a green semi-private communal space. This led to a conceptual idea where the open space is primarily used as a platform for urban gardening and a semi-private meeting point.



REFLECTIONS

When I compared these three scenarios, I realized that the version with green balconies does not support my concept of creating affordable housing in the city. However, I will incorporate the idea of bringing greenery growing on vertical structures in my further exploration as the building block around the pub is lacking greenery.

The first two concepts are quite similar, but I think I need to move away from the squatting background as it does not fully support my hypothesis. I realized that I want to aim for a semi-permanent to permanent communal living situation and increase the degree of space occupation. I will continue to work with the idea of building without building permissions.

My biggest challenge for now is accessibility. I am aiming for a structure to sit on top of the roofs of the building block. It would be possible to create open staircases going up from the courtyards of the block to its roof. From there, the inhabitants can move within the structure from roof to roof.

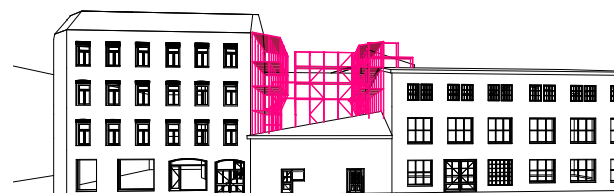
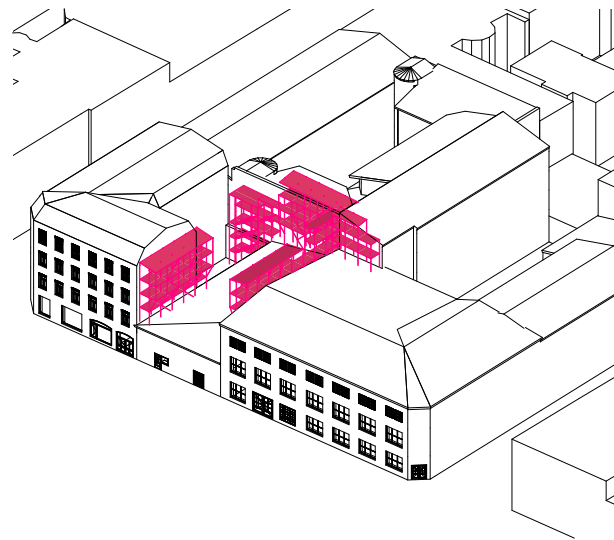
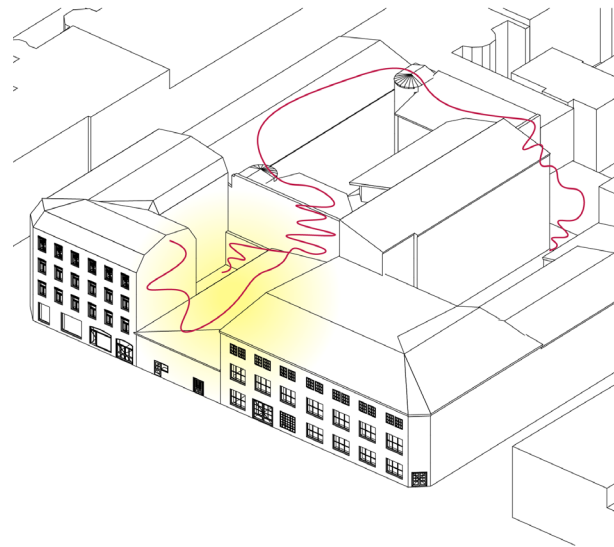
INTRODUCING
"SCAFFOLDING CITY"
TO LÅNGGATORNA.



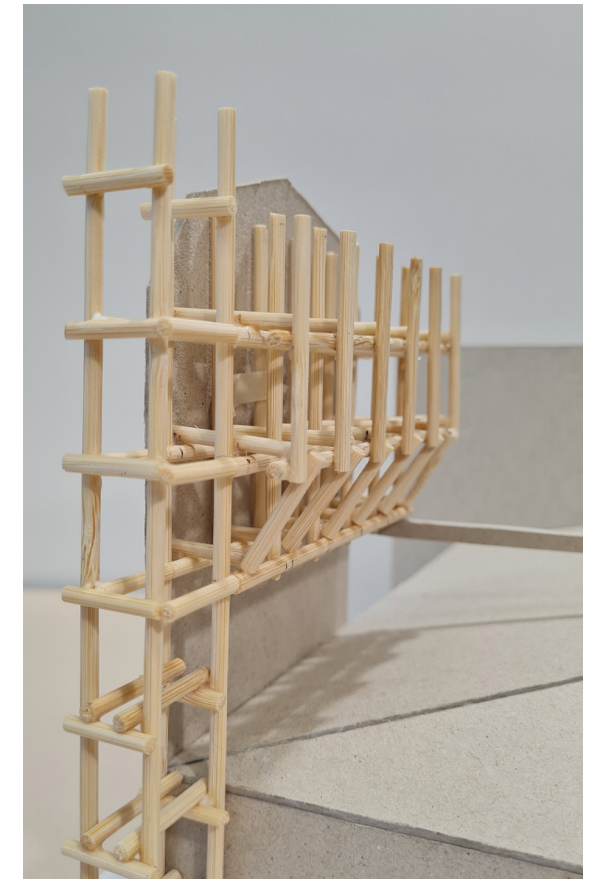
DESIGN PROCESS

The design process of implementing a structure to the roofs of Nordhemsgatan by following the urban hacktivism and building-without-permission-approach as well as the theory of “Scaffolding City”.

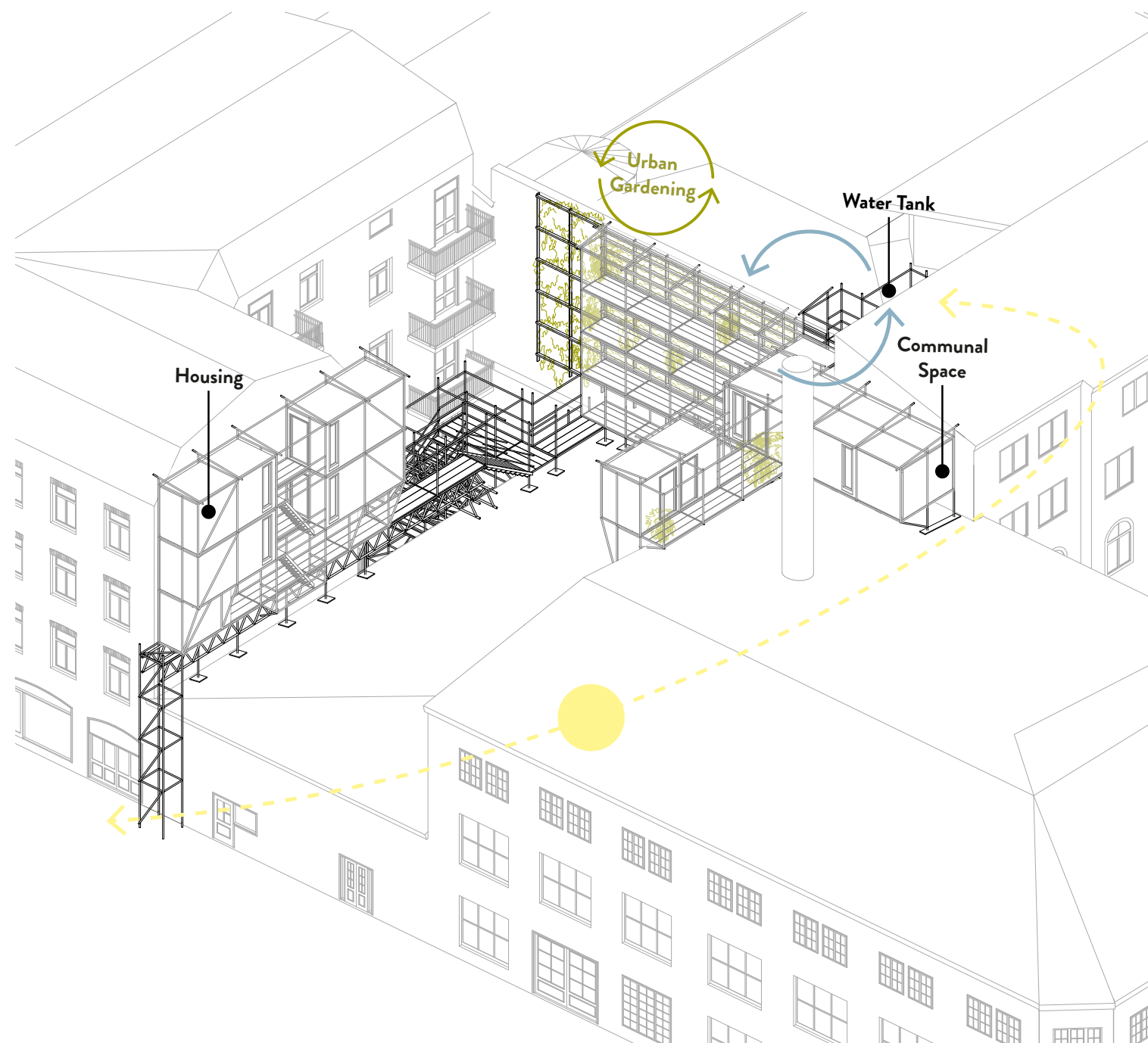
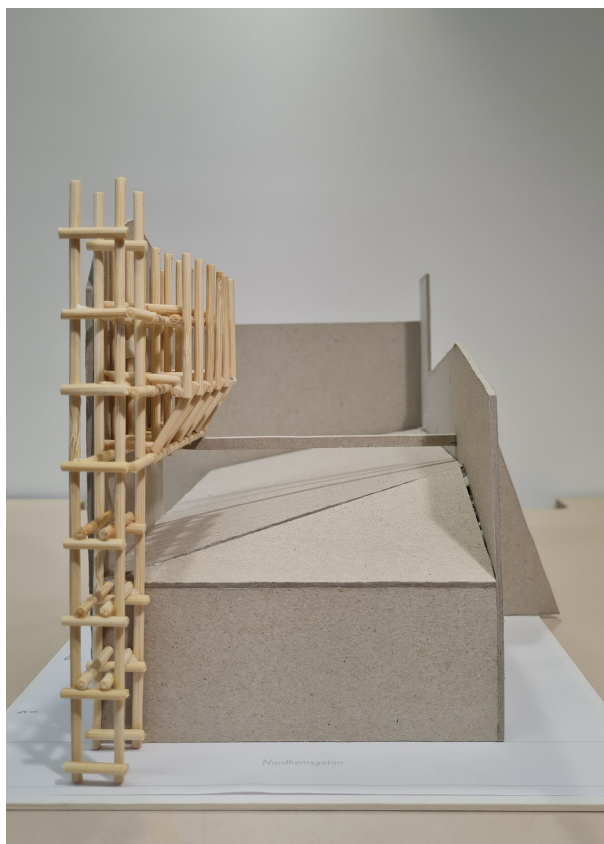
With the aim to create a semi permanent scaffolding structure with insulated enclosed spaces for housing, communal meeting spaces and urban gardening facilities for producing food locally.



Testing the shape of the structure and how it could be attached to the existing roofs and facades in 1:100 models.



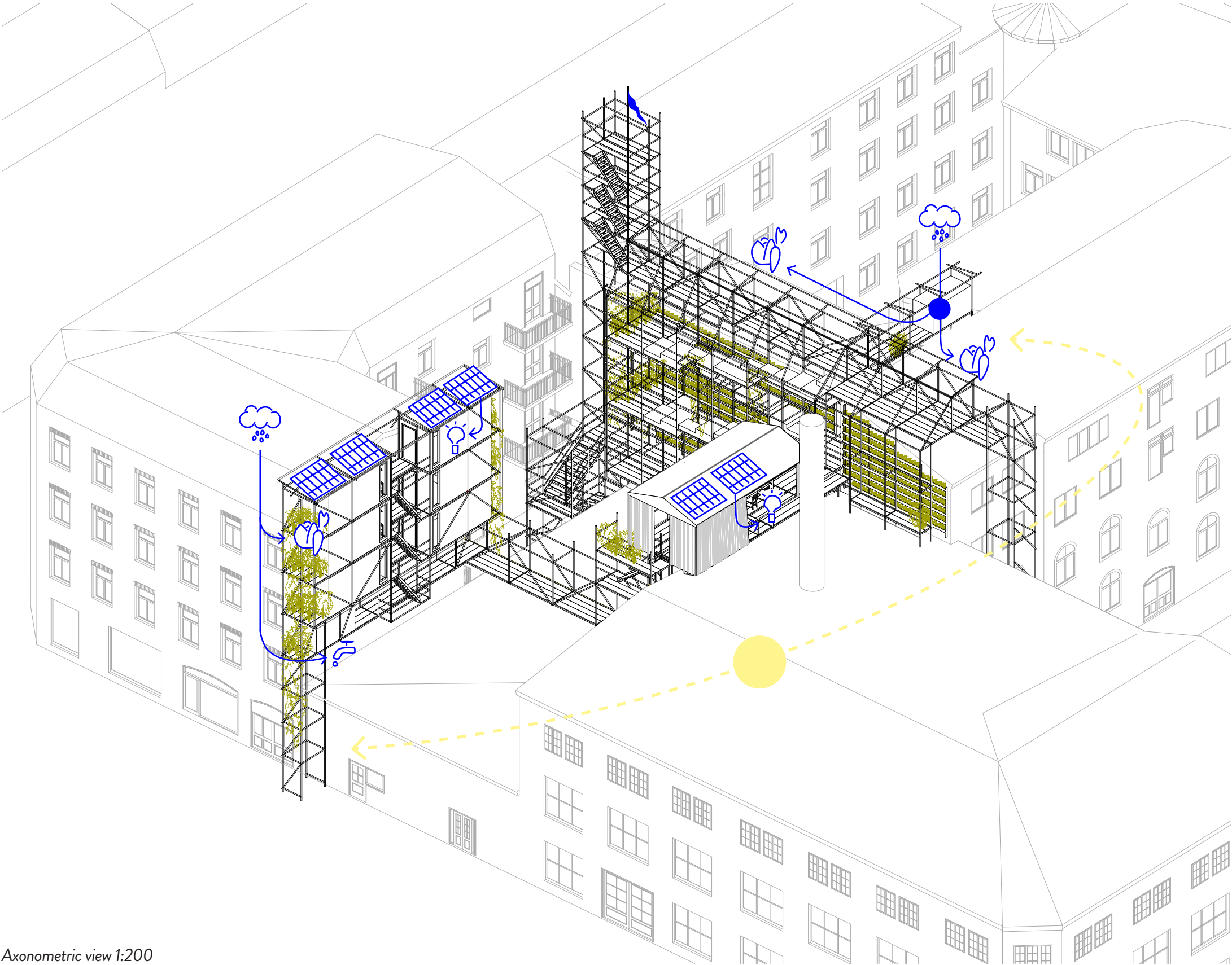
SHAPING THE CONCEPT



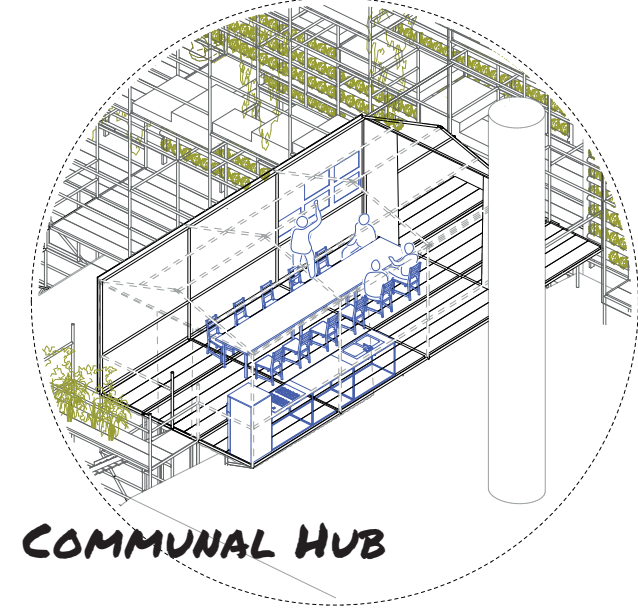
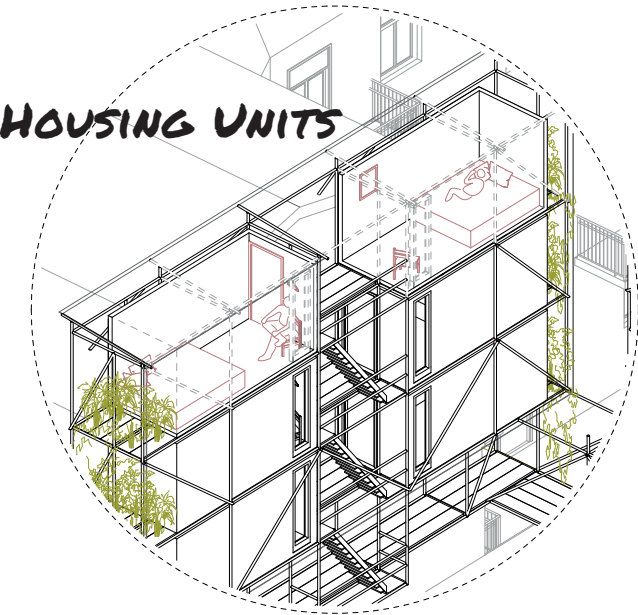
Through the design process I was able to refine the concept and usages of the structure as well as shaping it so that it serves them ideally. The result is a adaptable structure that explores and infiltrates urban leftover spaces like Wirths “Penthaus à la Parasit” and Cirugedas urban reserve out of scaffolding. Additionally, it appears like a parasite hijacking the roofs without permission. Due to its flexible construction method, the structure can potentially spread over whole Långgatorna and other parts of the city aswell as it can pop up in other cities of the world like Wirths tiny house.

The program reaches from urban farming over housing to communal hubs. Offering space for dicussion and learning and it invites citizens to get involved of shaping their environment and supporting the local community uniting economy, housing, urban agriculture and culture just like raumlabor berlins “utopia station” or the R-Urban bottom-up strategies by Atelier d’Architecture Autogérée that explore the possibilities of enhancing the capacity of urban resilience by introducing a network of resident-run facilities like in their “EcoHab”.

THE FINAL PROPOSAL



Axometric view 1:200



CONCEPT // USAGES

The spatial prototype inhabits three main functions:

The urban farming, the housing units and the communal space.

All together it is forming a cooperative and ecological housing hub, consisting of a number of minimal co-housing units and community spaces which are self-built. Along that, the objective of this urban structure is to challenge the strict rules of the housing market.

It includes shared services areas, water recycling, urban farming, renewable energy and communal meeting places. Building a new understanding of urban ecology and create a place to share practices of resiliency.

The whole structure and its residents and guests will be supplied through local energy and food production.

There are rain water collection points for watering the vertical garden and supplying the sinks in the restroom and kitchen. The roofs carry solar panels for the local energy production to supply the communal kitchen with enregy for example. Self-sufficiency and production and recycling to local and regional levels is helping to increase the capacity of urban sustainability and resilience.

There are six housing units with the potential of expension as a place to live for the people running the community hub and everyone with a small budget who want to live in the city center. Offering an instant housing oppurtunity and being an urban interruption of right to the city.

The structure offers meeting places to bring together the surrounding residents and invite the public to learn about urban farming, attend workshops, and discuss issues related to Gothenburgs urban planning ideals and gentrification processes of Långgatorna. With the aim to strengthen the community while giving them a voice.

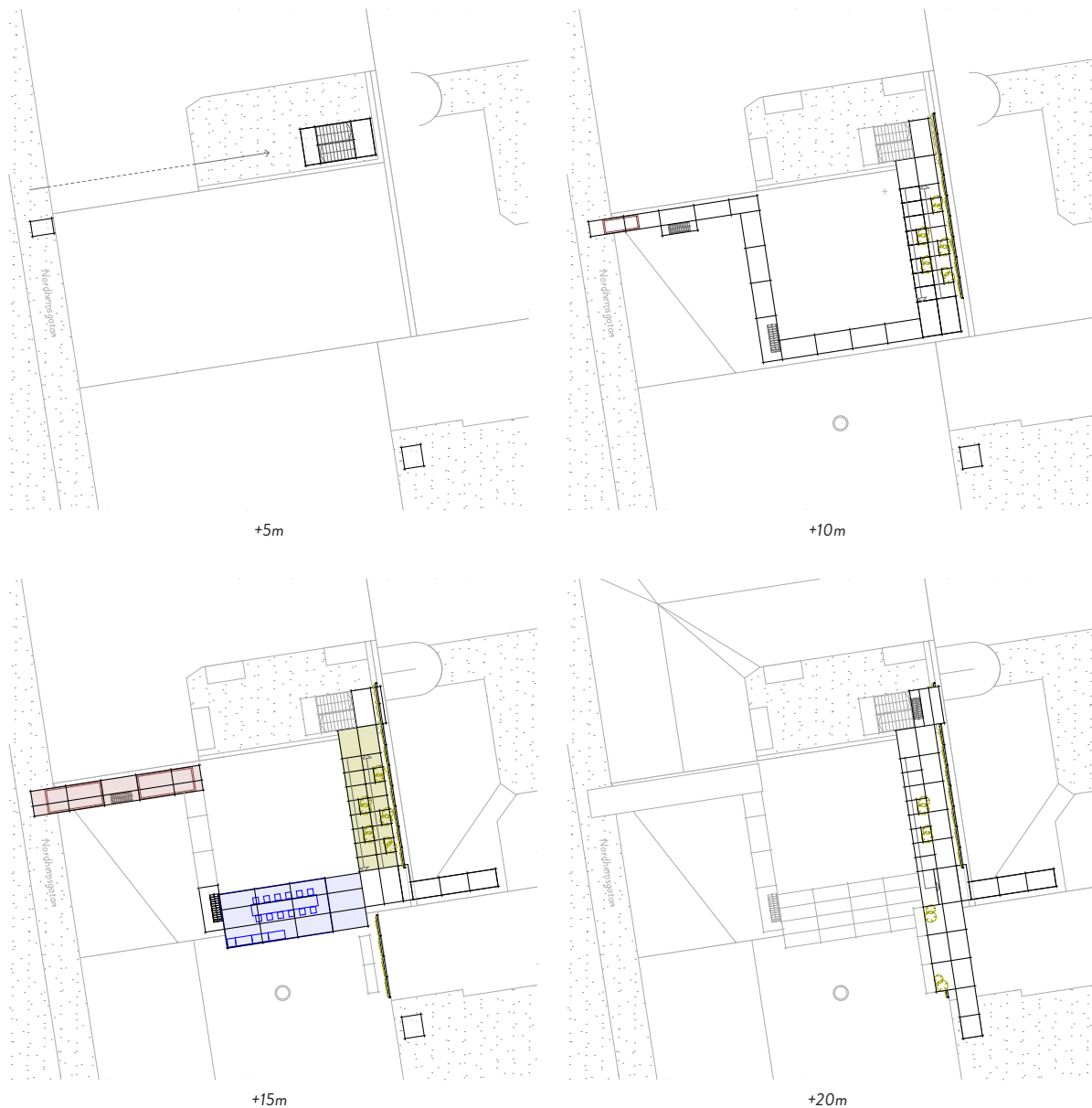
The communal space is connected to the vertical farm and the communal kitchen and offers a space for people to participate in various events such as urban farming, communal meals, talks, workshops, demonstrations, classes, and discussions but also creative activities like creating music or performances.

All of these help to explore social sustainability and strengthen the community, aiming to inspire citizens for an alternative urban living where citizens support each other through collaborative practices and through local networks. Resembling the same ambitions as the pavilion “Utopia station” from raumlaborberlin at the festival in Milton Keynes it is all about teaching, studying, growing and sharing your own resources.

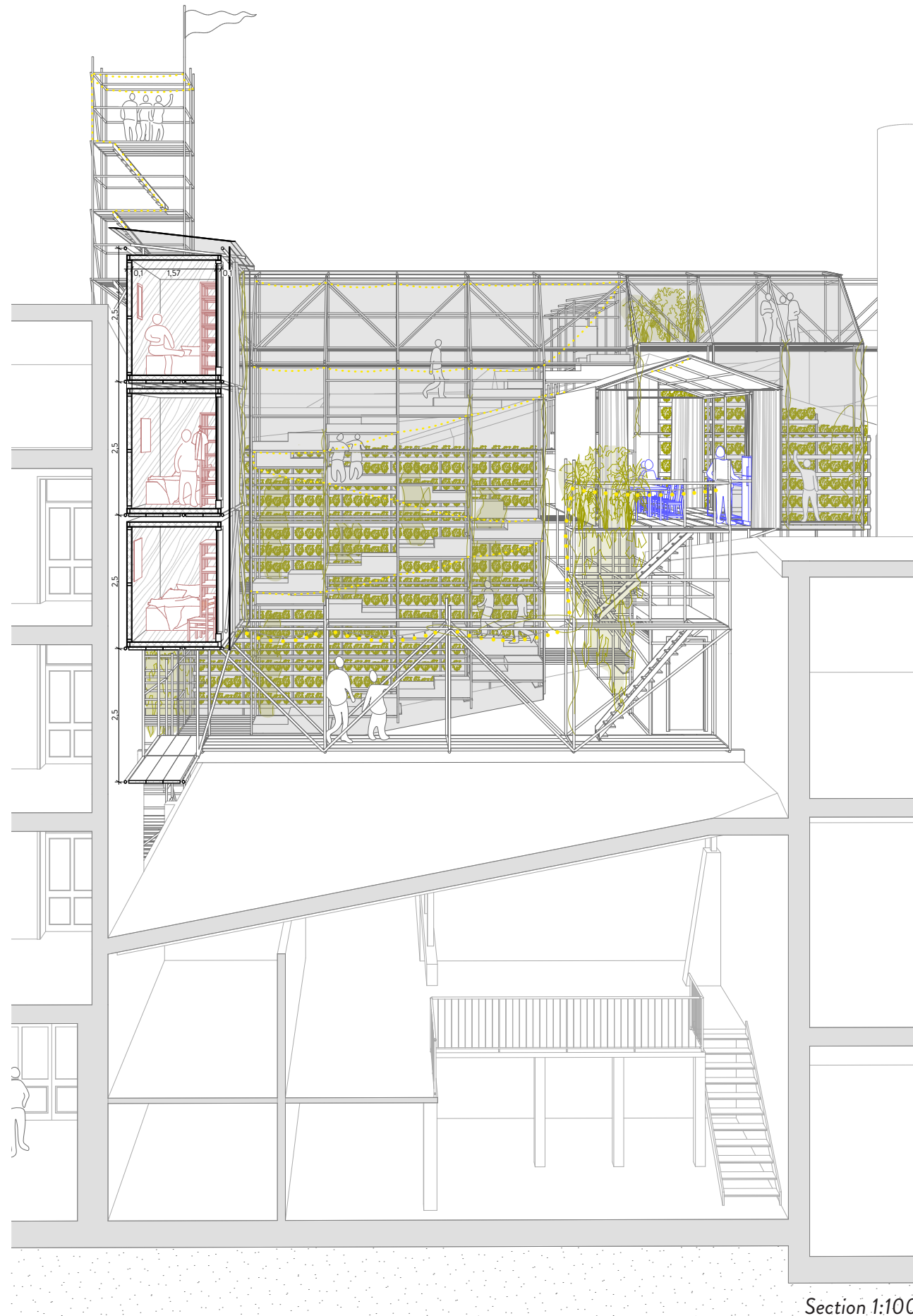
The central location of the structure right next to Andra Långgatan and its direct connection to the street level helps to draw attention to passers-by and a wider audience and invites them to engage in discussions and reimagine the public realm and the current urban reality of Gothenburg, including issues such as gentrification and the city’s prospects for the future. To ask and explore the questions like ‘for whom is the city center of Gothenburg?’.

By connecting locals and visitors and fostering social sustainability, the structure serves to strengthen the community and support its growth which can lead to a more sustainable and resilient built environment.

Additionally, they are the ones who know the needs and desires of their communities best and can provide valuable input and feedback on future urban planning proposals.



Top views 1:500



CONSTRUCTION METHOD

The three functions are framed and carried by a scaffolding construction that involves pre-manufactured elements and self-construction by non-professionals.

The rooftop of the pub and partly roofs of the neighbouring buildings will serve as the foundation for the project. Access will be granted via a staircase leading down to the courtyard of the neighbouring house. Multiple fire escapes are located wherever the structure meets the ground.

Basing the structure on a flexible construction method makes it possible to host these diverse usages on top of the existing roofs but also allows spaces to be reconfigured as needs change throughout the years. The scaffolding elements provide maximum flexibility and allow the structure to constantly evolve and adapt.

By using standardized and pre-manufactured elements, a fast and rather easy on-site construction and deconstruction is guaranteed. Structures can be easily assembled and disassembled, allowing for flexibility in their use as needs change over time.

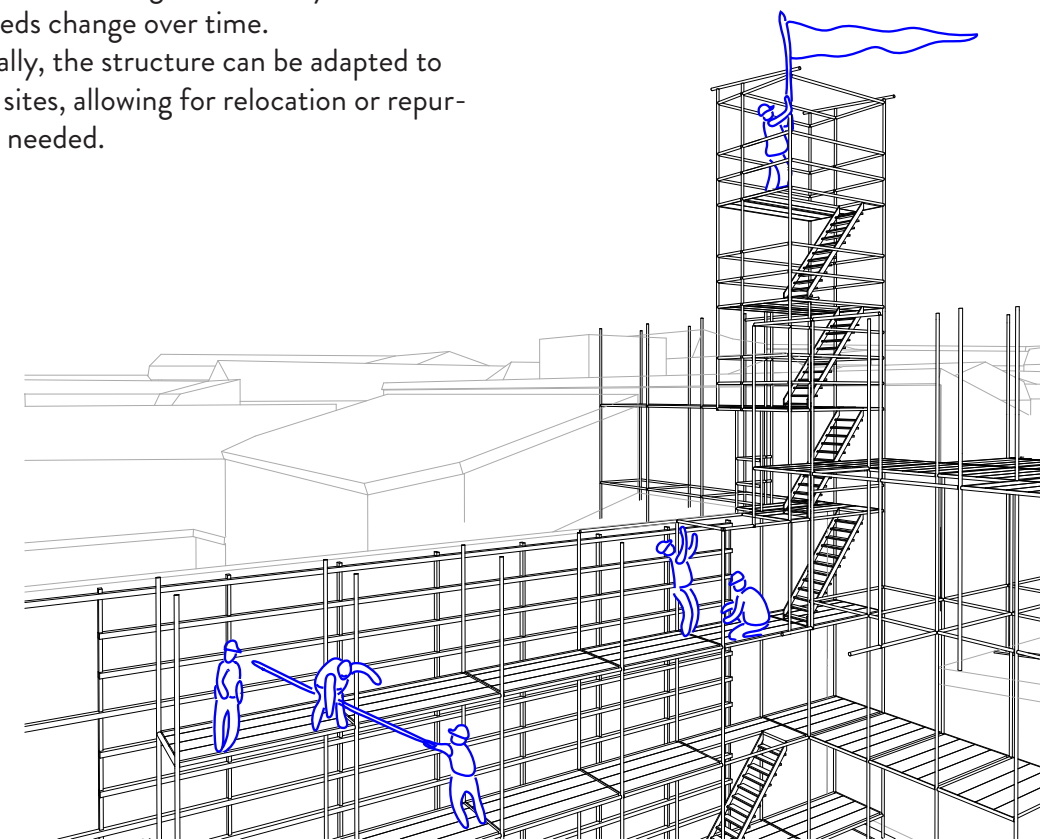
Additionally, the structure can be adapted to different sites, allowing for relocation or repurposing as needed.

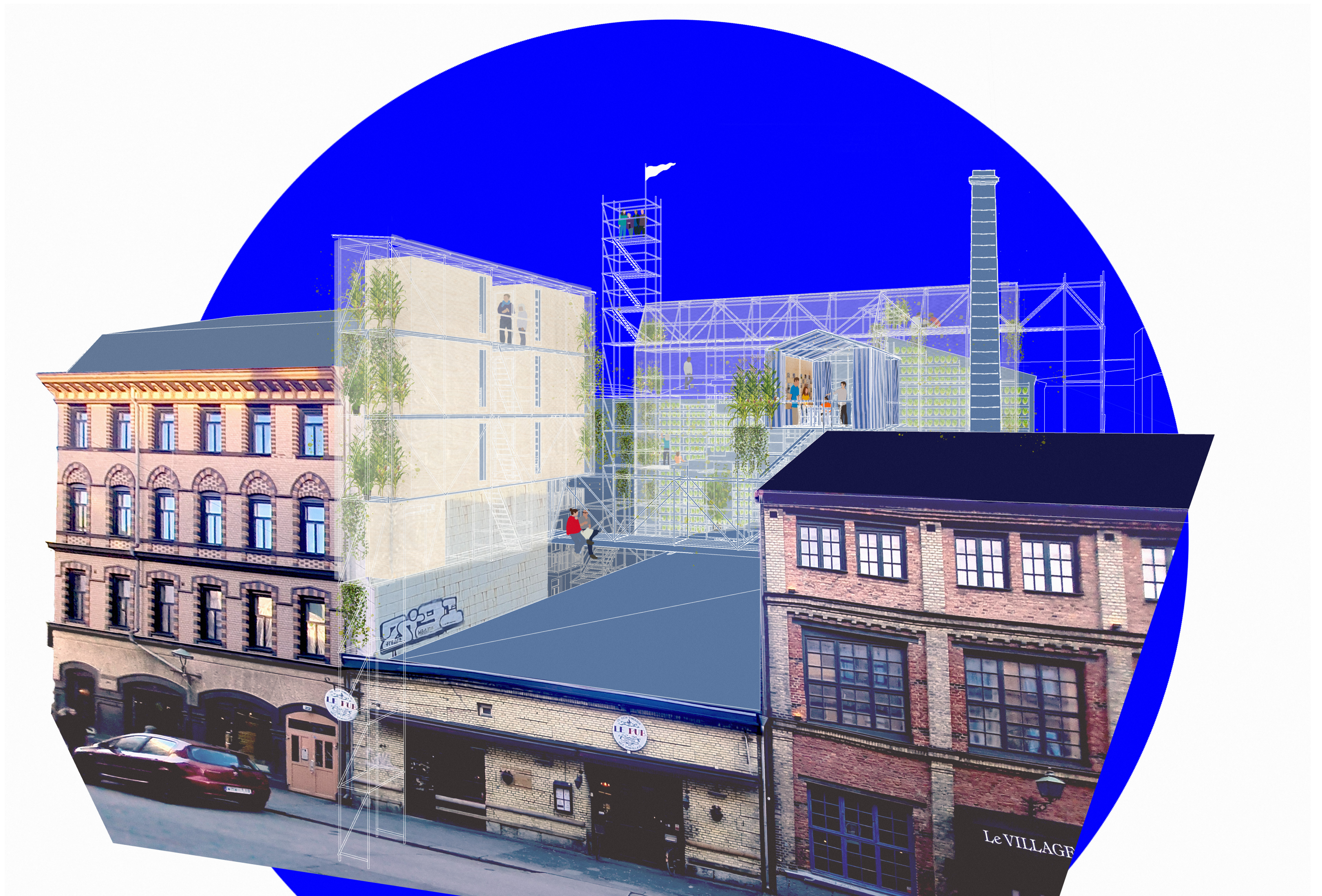
The standardized scaffolding structure promotes high participation as it is easily changeable and removable, even by non-professionals.

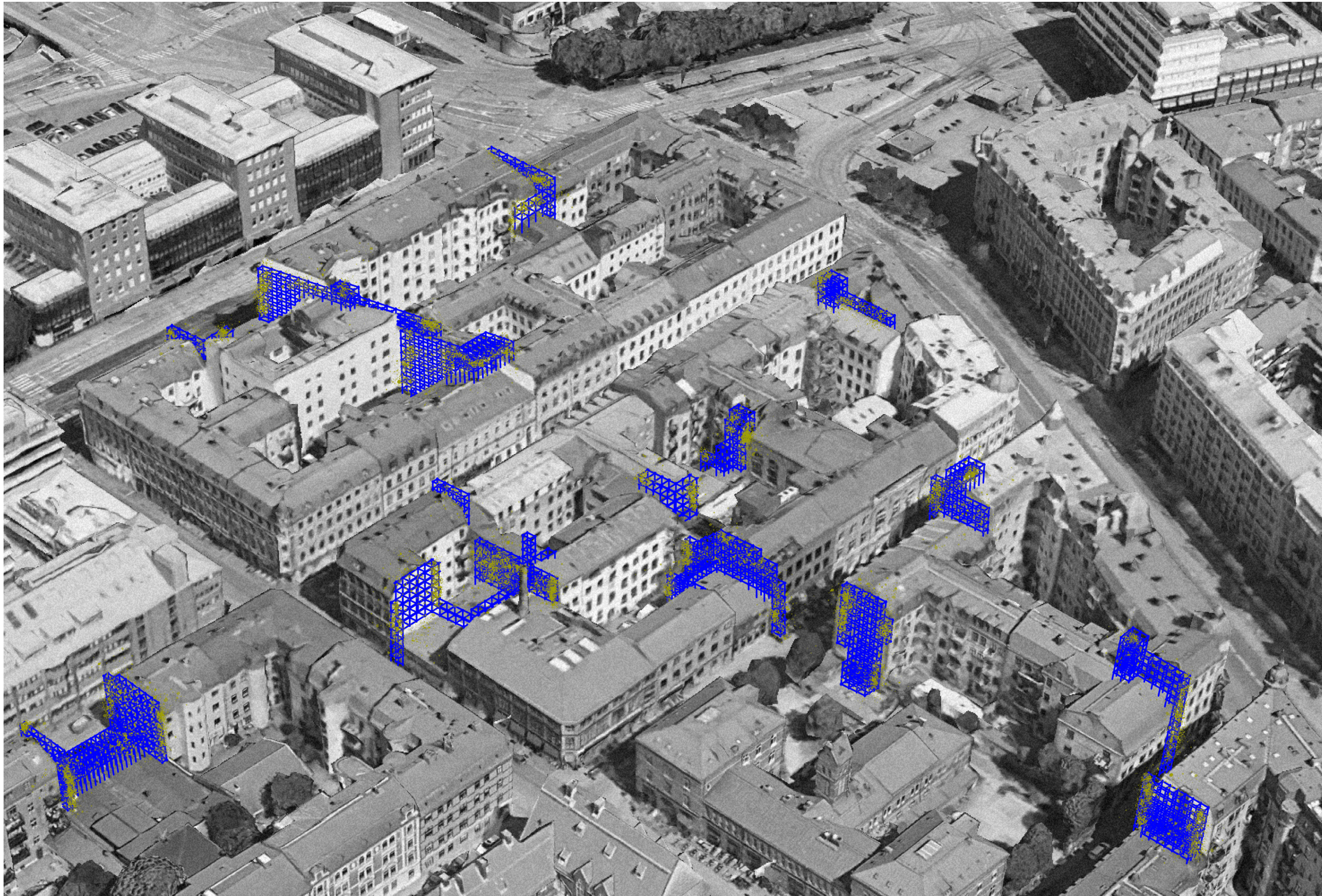
Following the “DIY Urbanism” by Cirugeda it encourages community involvement and empowers individuals to take ownership and responsibility for their environment which helps to create a greater sense of community and pride in their surroundings.

By involving the community in the construction and use of these structures, they can be tailored to meet the needs and desires of the people who use them, strengthening social connections and fostering community ownership.

Overall, this participatory approach and prioritizing flexibility and adaptability will result in a more resilient, sustainable, and interconnected community, and the spatial structure begins to resemble alternative urbanism.







An illustration of how the structure takes over all of Långgatorna profiting of its urban voids. As the design for movability and adaptability is allowing structures to be relocated or repurposed as needed it might continue to appear in other quarters and in many cities over the world.

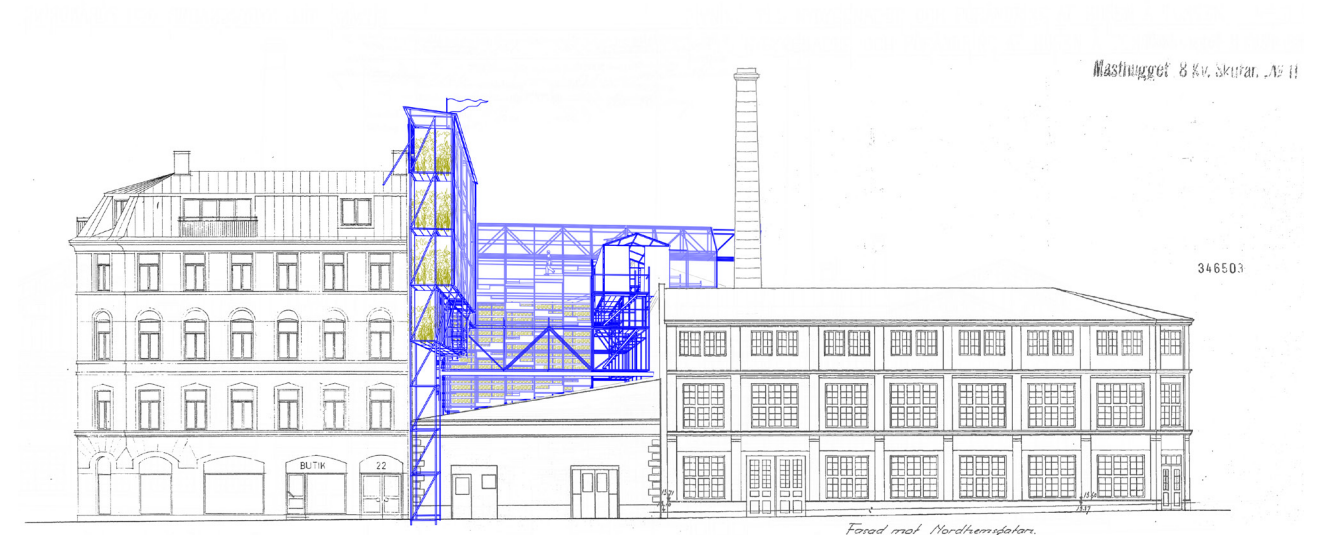
CONCLUSION // REFLECTIONS

This thesis's aim was to make use of urban leftover spaces in the city center of Gothenburg and to explore alternative urbanism. As a result, a design proposal was developed that focuses on promoting communal living, urban farming, and social sustainability, while also embracing adaptability and flexibility. To achieve this, various references of alternative architecture were analyzed, leading to a design process exploring different approaches to making use of this underused space.

Reflecting on the references and the project outcome shows that the answer to our rigid built environment lies in innovative, flexible, and adaptable structures that prioritize the needs of their inhabitants and their communities. Following the concept of "Right to the city" where urban spaces should be inclusive, democratic, and accessible to all residents. Democratizing the construction process and embracing change and flexibility offers a model of urbanism that is constantly evolving, adapting, and growing. In which each citizen becomes an active participant in shaping and developing their own environment. Creating an urban realm that is designed and built to withstand the challenges of an uncertain and ever changing future.

Returning to Steffen Braun's statement from the beginning of this thesis which pleads for architectural utopia and urban exploration and experimentation as essential element in developing new ideas and principles in urban planning. This thesis has been about these urban explorations and it has shown that it is indeed necessary to make these experiments in which we can radically rethink principles and broaden our range of possibilities. As demonstrated in my thesis, these explorations can lead to innovative solutions for underused spaces and contribute to a more sustainable and livable city.

Realizing such an urban exploration will require significant effort, resources, and collaboration from a wide range of stakeholders. Nevertheless, the use of adaptable systems like the scaffolding structures offer a compelling alternative to the current model of urbanism, which is often rigid, hierarchical, and environmentally unsustainable. By reimagining the built environment as a dynamic, flexible, and collaborative system, we may be able to create cities that are not only more livable and resilient, but also more democratic and sustainable in the long term.



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